III. REMARKS

Claims 1-32 are pending in this application. By this amendment, claims 11-12, 19, and 30-31 have been amended. Applicants do not acquiesce in the correctness of the rejections and reserve the right to present specific arguments regarding any rejected claims not specifically addressed. Furthermore, Applicants reserve the right to pursue the full scope of the subject matter of the original claims in a subsequent patent application that claims priority to the instant application. Reconsideration in view of the following remarks is respectfully requested.

In the Office Action, claims 1-4, 6-9, 11-12, 14-15, 17, 19, 21-24, 26-31 are rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over Thearling (US Pat. No. 6,240,411), in further view of Mani et al. (US Pat. No. 6,677,963), hereinafter "Mani." Office Action, p. 2. Applicants respectfully request withdrawal of the rejection in light of the following remarks.

With respect to claim 1, Applicants submit that neither Thearling nor Mani disclose each and every element of the claim, including "a customized model system for generating and ranking customized data mining models, and for executing a selected customized data mining model on the user data, wherein the customized data mining models are iteratively generated in parallel based on permutations of at least one of the user data, business parameters and a set of model generation algorithms." (*See* claim 1, and as similarly recited by claims 8, 14, 21, and 28). In support of its rejection, the Office asserts that col. 8, lines 25-30 of Thearling discloses regenerating and running the models against one or more records in a database in parallel. Office Action, p. 3. However, in response, Applicants submit that neither the passage recited by the Office, nor Thearling as a whole discloses, *inter alia*, "…executing a selected customized data mining model on the user data, wherein the customized data mining models are iteratively generated in parallel[.]" *See* claim 1.

Interpreting Thearling only for the purposes of this response, Applicants submit that Thearling discloses,

> "[a]t a step 110, one of the models within the query is selected for evaluation. This selection may be done randomly. In the alternative, the user could input the order of models for selection. In another embodiment, the campaign manager could automatically select the order of models. The selection could be based, for example, on the anticipated computation time for scoring an individual record. Thus, those models that require less computation time may be selected before models which require greater computation time." Col. 13, lines 35-44.

According to the above passage, Thearling discloses selecting and evaluating each model separately and consecutively. Nowhere in the cited passage or elsewhere does Thearling teach that the customized data mining models are iteratively generated in parallel.

In contrast, the present invention recites, *inter alia*, "a customized model system for generating and ranking customized data mining models, and for executing a selected customized data mining model on the user data, wherein the customized data mining models are *iteratively generated in parallel* based on permutations of at least one of the user data, business parameters and a set of model generation algorithms[.]" (*See* claim 1. Emphasis added.) In the present invention, model generation system 50 will generate the data mining models in parallel (e.g., in a grid-like fashion) such that data mining models are generated at the same time/simultaneously. (*See* Specification, p. 12.) By generating the data models in parallel, the inefficiencies present in Thearling caused by having to generate each data mining model one at a time are avoided. Applicants submit that both Thearling and Mani fail to disclose each and every element of claim 1. Therefore, the Office has failed to make out a prima facie case of obviousness and Applicants respectfully request withdrawal of the rejection.

With respect to amended claims 11, 19 and 30, Applicants submit that neither Thearling nor Mani disclose each and every element of the claim, including "executing the plurality of existing data mining models on the user data in parallel." In support of its rejection, the Office asserts that Thearling discloses "run[ning] the model against one or more records in a database. All models are run against the entire database, which includes records about customer data." Office Action, p. 3. However, Applicants submit that running a model against one or more records in a database is not equivalent to executing a plurality of models in parallel. As discussed above with respect to claim 1, Thearling only discloses selecting and evaluating each model seperately. Col. 13, lines 35-44. While in contrast, the claimed invention recites, *inter alia*, executing the plurality of existing data mining models on the user data in parallel. In the present invention, existing model selection system 72 selects a plurality of data mining models from the library. Specification, p. 14. Upon such a selection, existing model execution system 74 will execute each selected data mining model on the user data 58 in parallel (e.g., in a grid fashion). Id. However, in Thearling, FIG. 11 illustrates an evaluation of a database where multiple models are included within a query, but only a single model is evaluated at any given time. (*See* FIG. 11 and col. 13, lines 21-43). Mani fails to cure this deficiency. Therefore, Applicants submit that both Thearling and Mani fail to disclose, *inter alia*, executing the plurality of existing data mining models on the user data in parallel. Accordingly, Applicants submit that the Office has failed to make out a prima facie case of obviousness and respectfully request withdrawal of the rejection with respect to amended claims 11, 19 and 30.

Furthermore, the Office has admitted that Thearling fails to teach the claimed limitation "based on permutations of at least one of the user data, business parameters and a set of model generation algorithms." Office Action, p. 3. However, the Office asserts that "Mani teaches a

model manipulation system [that] allows a user to manipulate the generated mode[l]." Office Action, pp. 3-4. While Mani discloses generally a model manipulation system, Applicants submit that there is no motivation or suggestion to combine the teachings from Mani, with a method for restricting the number of records scored by a model, as disclosed by Thearling. Mani teaches a tool for directed data analysis that incorporates a business analyst's domain knowledge to modify a data mining model. Thearling, however, fails to disclose any modification of the model itself, but instead discloses the use of a model score to rank and then divide the records that have satisfied a query. In this way, Thearling restricts the total number of records scored by the model. While data mining in general is well known in the art, there is no reason why Thearling or Mani, or a person of ordinary skill in the art, would consider an invention that evaluates an existing data mining model against fewer than all of the records in a database in order to save computation time when they are facing problems associated with the modification/manipulation of rules and parameters of a model that evaluates the entire record. As a result, Applicants submit that there is no motivation or suggestion to combine the cited references and respectfully request the withdrawal of the rejection.

In the Office Action, claims 6, 17, and 26 are rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over Thearling, in view of Mani et al., and in further view of Hoffman et al. (US Pat. No. 6,687,696), hereinafter "Hoffman." Office Action, p. 8. It is unclear from the Office Action, the particular passage or portion of Hoffman the Office has used as the basis for the rejection. Applicants respectfully request that the Office provide a more definite citation to support its rejection.

In the Office Action, claims 5, 10, 13, 18, 20, 25, and 32 are rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over Thearling, in view of Mani, in further view of

Hoffman. Office Action, p. 15. Applicants herein incorporate the arguments presented above with respect to the independent claims from which the claims depend.

In the Office Action, claim 16 is rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over Thearling, in view of Mani, and in further view of King Jr. et al (US Pat Application No. 6,677,963), hereinafter King. The Office admits that Thearling fails to disclose either element of claim 16. Office Action, p. 16. However, in support of its argument, the Office asserts that King's multi-blocker tool, as disclosed in paragraph 0116, teaches "forming multiple permutations of at least one of the user data, the business parameters and the set of model generation algorithms," and "iteratively generating a plurality of customized data mining models in a grid environment based on the multiple permutations." Id. In response, Applicants submit that King fails to disclose, *inter alia*, "iteratively generating a plurality of customized data mining models in a grid environment based on multiple permutations." Claim 16. In particular, Applicants submit that the GE Model shown by FIG. 15 and as discussed in paragraphs 0116-0117, merely discloses a general business model for evaluating "the respective attractiveness and strengths of the products and services in the organizations portfolio, and then places the products and services at appropriate locations on the grid as a function of such assessment. The positions of the products and services on the grid thus clearly convey the relative merits of different business solutions." Paragraph [0117]. Applicants submit that a metric to assess business products or services generally is not equivalent to iteratively generating a plurality of customized data mining models in a grid environment based on the multiple permutations. Therefore, Applicants submit that King fails to disclose each and every element of the claimed invention. Accordingly, Applicants submit that the Office has failed to make out a prima facie case of obviousness and respectfully request withdrawal of the rejection with respect to claim 16.

Furthermore, Applicants submit that there is no suggestion or motivation to combine the teachings of King, with the data mining models disclosed generally by Thearling and Mani. King fails to provide any disclosure of generating customized data mining models. Accordingly, it is incomprehensible why Thearling or Mani, or a person of ordinary skill in the art, would consider an invention that simply evaluates business products and services when they are facing problems associated with the modification/manipulation of a data mining model. As a result, Applicants submit that there is no motivation or suggestion to combine the cited references and respectfully request the withdrawal of the rejection.

Still furthermore, Applicants herein incorporate the arguments presented above with respect to claim 14 from which claim 16 depends.

With respect to independent claims 8, 14, 21, and 28, Applicants herein incorporate the arguments made above with respect to claim 1. Accordingly, Applicants respectfully request that the Office withdraw its rejection.

With respect to dependent claims 2-4, 7, 9, 12, 15, 22-24, 27, 29, and 31. Applicants herein incorporate the arguments presented above with respect to the independent claims from which the claims depend. The dependent claims are believed to be allowable based on the above arguments, as well as for their own additional features.

IV. CONCLUSION

In light of the above, Applicants respectfully submit that all claims are in condition for allowance. Should the Examiner require anything further to place the application in better condition for allowance, the Examiner is invited to contact Applicants' undersigned representative at the number listed below.

Respectfully submitted,

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